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A Redescription and New Distributional Records of the Clavigerine Species *Anaclasiger sinuaticollis* (Coleoptera, Staphylinidae, Pselaphinae)

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Abstract The type species of the clavigerine genus *Anaclasiger*, *A. sinuaticollis* RAFFRAY known from Singapore and Taiwan is observed by SEM and redescribed. New distributional records of this species from Thailand, Malaysia and Japan are also given.

RAFFRAY described a unique type of clavigerine species, *Anaclasiger sinuaticollis* from Singapore in 1890. This species is distinct in having the asymmetrically modified antennal club formed by the last segment. It is the type species of the genus *Anaclasiger* and its only member. It was also recorded from Taiwan by RAFFRAY (1914), and is reported from Endau-Rompin of the Malay Peninsula by NOMURA and IDRIS (2006?).

The authors have examined this species by SEM and will redescribe it in this study. They also record the species from Thailand and Kuchinoerabu Island, Southwest Japan.

Material and Methods

The material for the SEM observations was not metal-coated. It was examined by a scanning electron microscope (SEM: JEOL JSM-6380LV), and was observed under the condition with low accelerating voltage 1 kV, and were digital-micrographed from various angles. Scale bars in all figures are in micrometres. Measurements of the body and the parts were made by NOMURA with a stereo microscope (Leica MZ Apo).

The depositories of the material examined are abbreviated as follows. MNHN: Muséum national d'Histoire naturelle, Paris; NSMT: National Science Museum, Tokyo; UKM: School of Environmental and Natural Resource Sciences, Faculty of Sciences and Technology, Universiti Kebangsaan Malaysia, Bangi, Selangor.

Genus *Anaclasiger* RAFFRAY

Anaclasiger RAFFRAY, 1890, Revue Ent., Caen, **9**: 165.

Type species: *Anaclasiger sinuaticollis* RAFFRAY.

Remarks. This genus is easily distinguished from the allied genera by having the four-segmented antenna with the longest and asymmetrically twisted last segment. It was classified into the tribe Clavigerodini by NEWTON & CHANDLER (1989), but its systematic position is poorly discussed.

Anaclasiger sinuaticollis RAFFRAY, 1890

[Japanese name: Nejire-higebuto-arizukamushi]

(Figs. 1–4)

Anaclasiger sinuaticollis RAFFRAY, 1890, Revue Ent., Caen, **9**: 216.

Type material examined. Syntypes: 10 exs. (MNHN), (red square label only on a male) / Singapore / *Anaclasiger* RAFF., *Sinuaticollis* RAFF., Singapore / Muséum Paris 1917 Coll. A. RAFFRAY / *A. sinuaticollis* A. RAFFRAY det.

Specimens examined. 2 females (NSMT), Honmura, Kuchinoerabu Is., Kagoshima Pref., Kyushu, Japan, 17–XI–1985, T. TANABE leg.; 1 male (NSMT), N. W. Chiang Mai, Chiang Mai Prov., Thailand, 6～26–V–2002, T. TSURU leg.; 1 female (UKM), FIT (NG-3), Nr. gate, Endau-Rompin Nat. Res., Pahang, Malaysia, 21～25–VII–2004, S. NOMURA leg.

M a l e (Fig. 1). Body length 1.52 mm, width 0.59 mm, middle-sized, gently flattened dorsoventrad, broad in elytra and abdomen, color reddish brown, shiny.

Head (Fig. 2 A–F) slightly longer than wide, subcylindrical, densely covered with coarse and irregular reticulation; clypeus short, truncate at apex, with a transverse line of setae just bahind anterior margin; frons narrow, convex dorsoapically; vertex concave, with a pair of large and round dorsal tentorial pits; genae strongly projected anterolaterad; postgenae gently rounded. Eyes developed, convex and ovoid, each

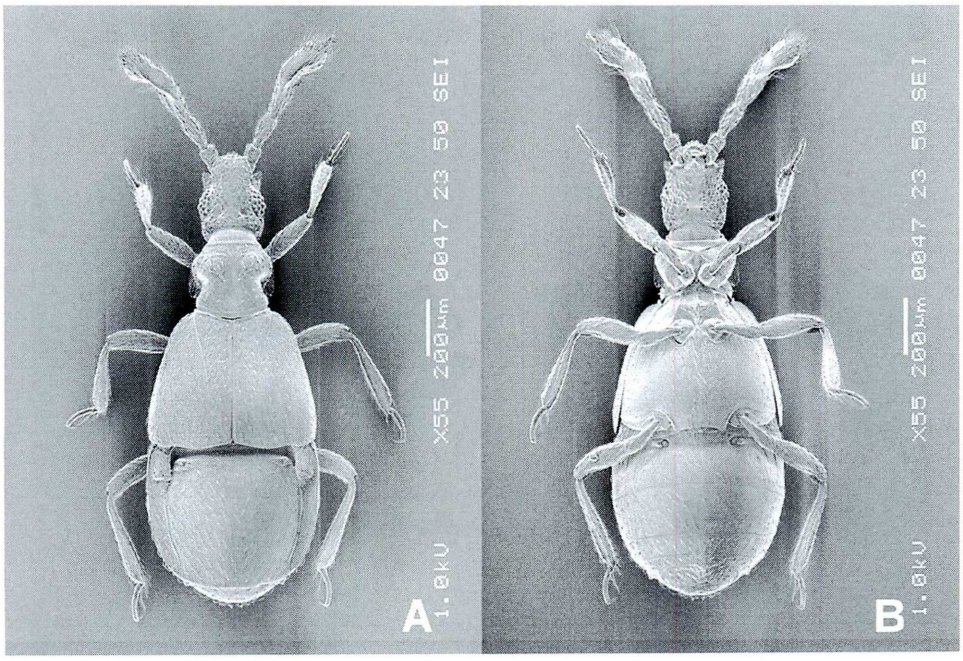


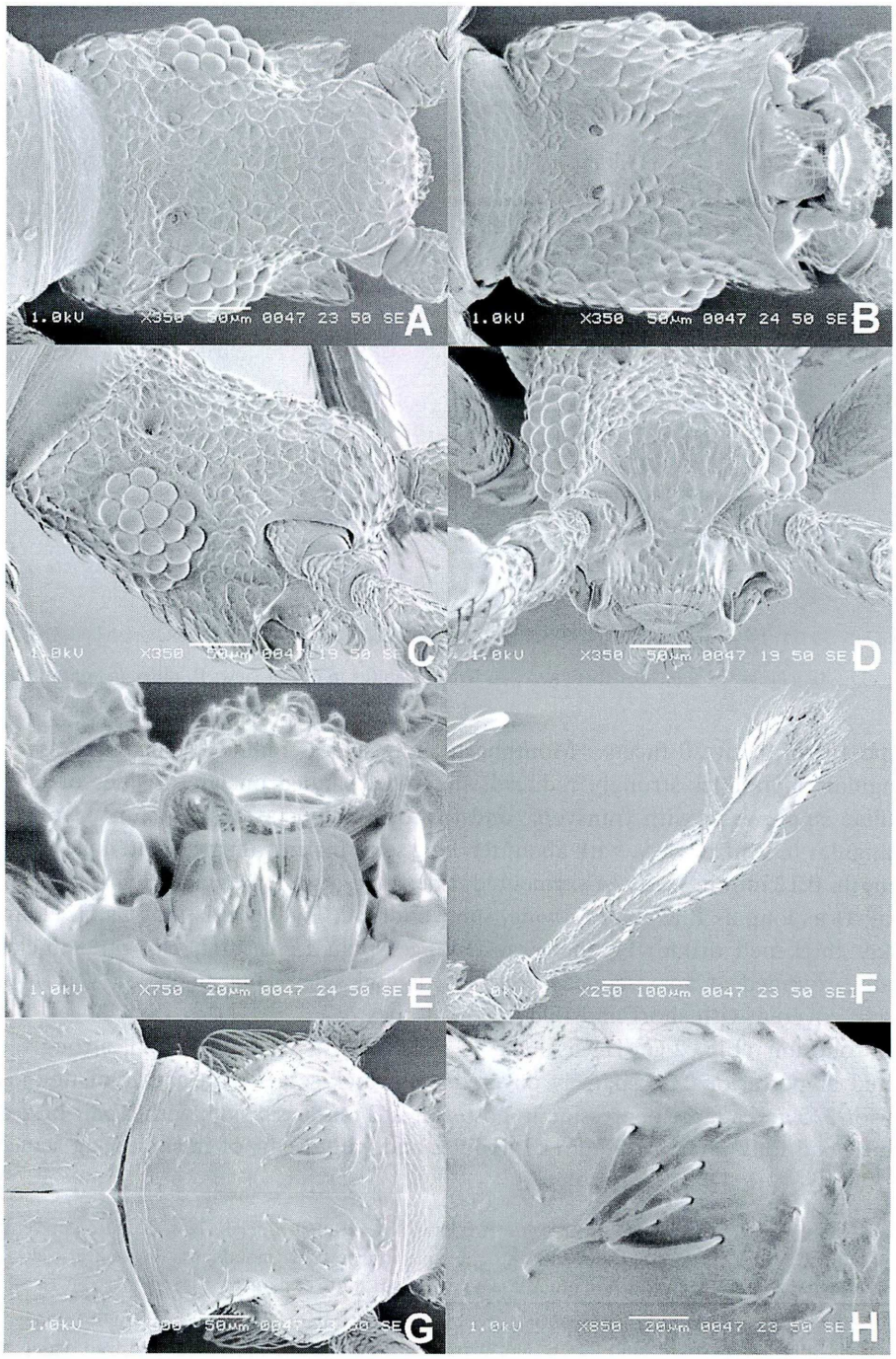
Fig. 1. *Anaclasiger sinuaticollis* RAFFRAY; A, female habitus in dorsal view; B, ditto, in ventral view.

composed of about 20 facets. Mouthparts more or less reduced; labrum transversely triangular; mandibles strongly reduced, slightly expanded on lateral sides of labrum; maxillae small, each with transverse and fusiform palpus at base; labium transversely rectangular in ventral view, with about ten long setae in central part. Antennae 0.50 mm in length, 0.12 mm in width, 4-segmented, thickened distally; segment I short, subcylindrical; II as long as I, as long as wide, subcylindrical; III twice as long as II, elongate, weakly thickened distad; IV the largest, longer than I+II+III, elongate, thickened distally, rounded at apex, concave on both lateral sides, emarginate on ventral side, densely covered with short and thick setae at apex.

Pronotum (Fig. 2 G, H) as long as wide, widest at anterior 2/5, strongly constricted at posterior 2/5, sparsely covered with thick setae, with a pair of nodules at anterior 2/5 and a large depression in posterior 2/3 on dorsal side, with a pair of groups of thick and long setae at the dorsal nodules and with a pair of lines of long setae just

Fig. 2 (on p. 288). *Anaclasiger sinuaticollis* RAFFRAY; A, head in dorsal view; B, ditto, in ventral view; C, ditto, in lateral view; D, ditto, in anterior view; E, mouthparts in ventral view; F, antenna in dorsal view; G, pronotum in dorsal view; H, ditto, enlarged.

Fig. 3 (on p. 289). *Anaclasiger sinuaticollis* RAFFRAY; A, thorax in ventral view; B, right fore leg; C, right mid leg; D, right hind leg; E, left elytron; F, abdomen in dorsal view; G, ditto, basal part enlarged; H, abdomen in ventral view.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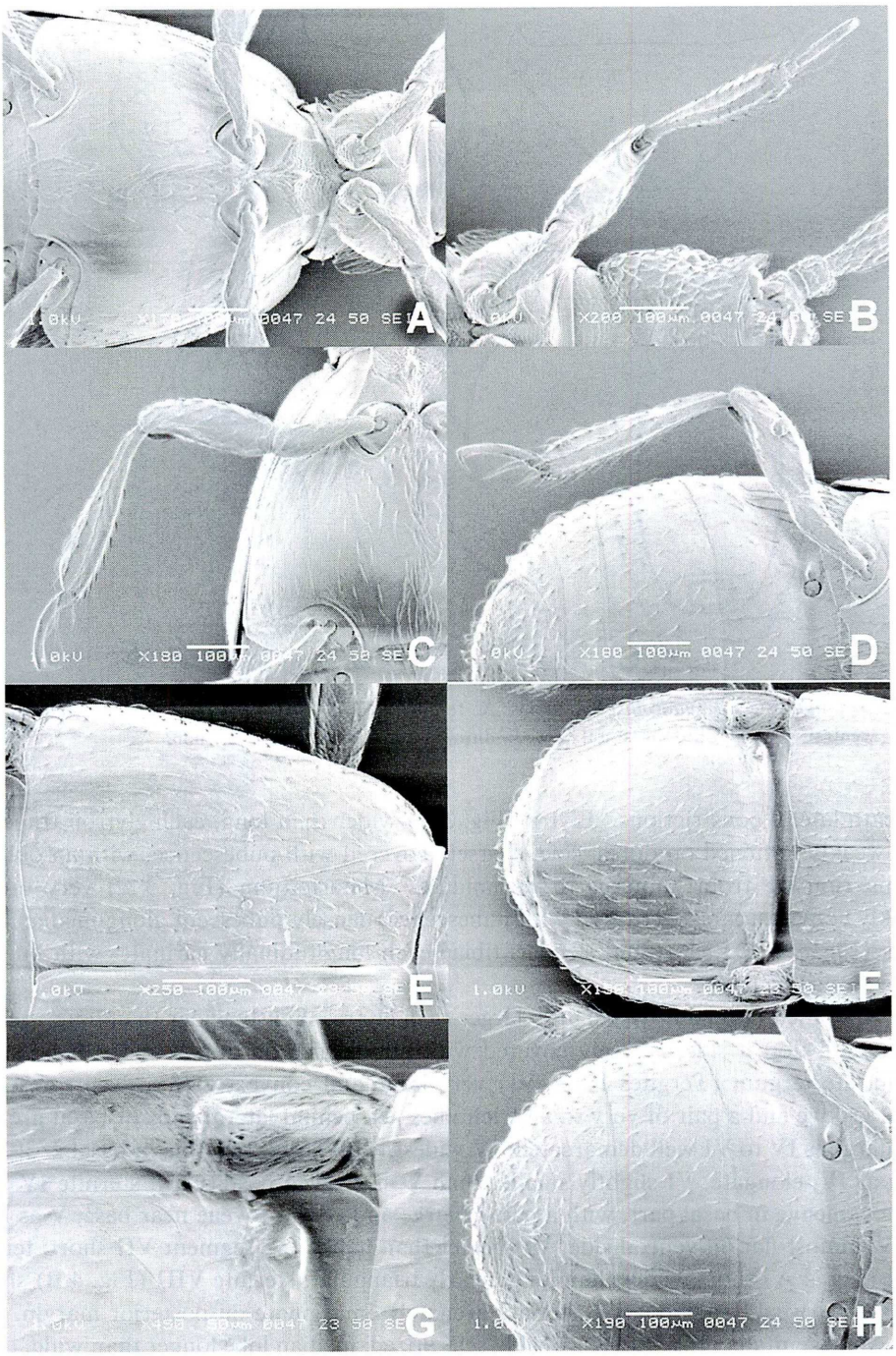
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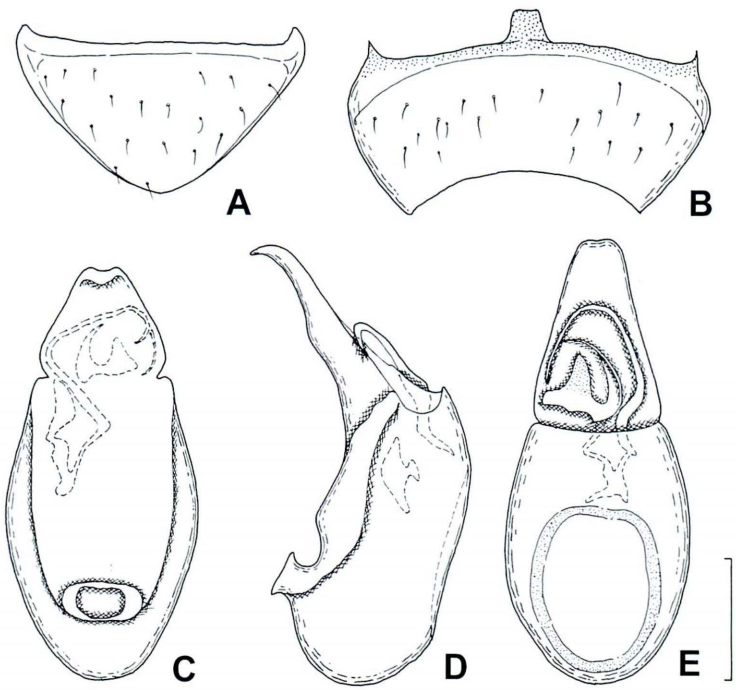

Fig. 4. *Anaclasiger sinuaticollis* RAFFRAY; A, tergite VIII; B, sternite VIII; C, male genitalia in ventral view; D, ditto, in lateral view; E, ditto, in dorsal view. Scale: 0.1 mm.

beneath lateral constrictions. Elytra (Fig. 3 E) wider than long, each elytron trapezoidal, weakly flattened on dorsal side, sparsely covered with pubescence, with an oblique carina running from humerus to the middle. Metasternum (Fig. 3 A) very broad, weakly convex, sparsely covered with pubescence, densely pubescent along median line. Legs (Fig. 3 B–D) short and slender; tibiae each longitudinally carinate, with lines of setae along carinae.

Abdomen (Fig. 3 F–H) slightly larger than elytra, slightly wider than long, weakly convex on dorsal side, sparsely covered with pubescence on dorsal and ventral sides; composite tergum (Tergites IV to VI) very large and convex, with a deep transverse basal groove and a pair of very small trichomes just behind lateral ends of basal groove; paratergites IV to VI well demarcated; IV widest, with large trichome in basal 2/3; V as long as IV, elongate; VI slightly smaller than V, narrowed posteriorly; sternite IV very large, concave in basal part, with a pair of large and round foveae near base; V as long as IV, almost flat on ventral side; VI shorter than half of V; segment VII short; tergite VIII (Fig. 4 A) short, wider than long, nearly triangular; sternite VIII (Fig. 4 B) short, transverse, weakly narrowed posteriad, arcuately emarginate on posterior margin.

Male genitalia (Fig. 4 C–E) weakly sclerotized; median lobe longer than wide, thick in basal part, symmetrical; basal bulb ovoid, weakly narrowed distad, with weakly

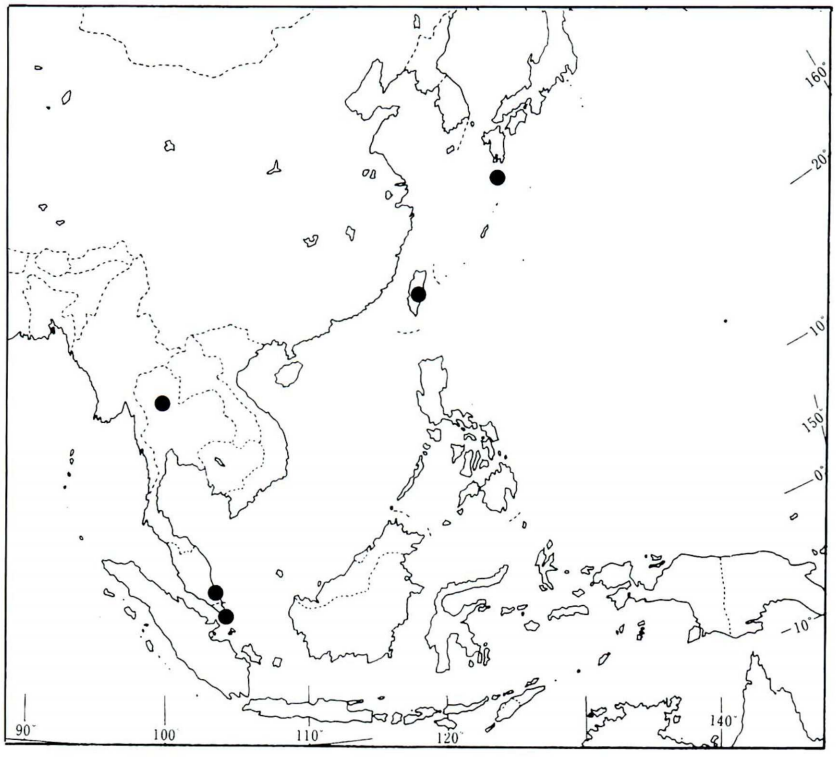

Fig. 5. Map showing the distribution of *Anaclasiger sinuaticollis* RAFFRAY.

projected basal foramen on ventral side, with a large elliptical membranous part on basidorsal side; apical part strongly narrowed toward apex, weakly curved ventrad in apical 1/4; endophallus weakly sclerotized, complicated and asymmetrical, consisting of four sclerites; largest sclerite very long and slender, much thinned toward apex, strongly curved rightwards.

F e m a l e. Body length 1.60–1.70 mm, width 0.64–0.67 mm. Antennae 0.49–0.50 mm in length, 0.12–0.15 mm in width. Similar to male, but body slightly wider than in male, eyes smaller than in male, each composed of about 15 facets.

Distribution (Fig. 5). Thailand, Malaysia, Singapore, Taiwan, Japan.

Remarks. This species is easily distinguished from the other clavigerine species by some special characters, namely the asymmetrically modified antennal segment IV, the strongly constricted pronotum, and so on. On the other hand, it has some primitive characters, the antennal club devoid of apical concavity, the elytra each with a basal longitudinal carina and the male genitalia containing sclerotized endophallus. The systematic position of this species is still poorly known. However, it is regarded as a distant taxon from the group of clavigerine genera sharing the truncate antennal club with a concavity containing short setae or sensilla at the apex.

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要　約

野村周平・Watana SAKCHOOWONG・Idris Abd. GHANI：ヒゲブトアリヅカムシの一種 *Anaclasiger sinuaticollis* ネジレヒゲブトアリヅカムシ（和名改称）の再記載と新分布記録（コウチュウ目ハネカクシ科アリヅカムシ亜科）．—— シンガポール，台湾から知られていた *Anaclasiger sinuaticollis* RAFFRAY を，走査型電子顕微鏡による観察をもとに再記載した．またタイ（チェンマイ），マレーシア（パハン州エンダウ-ロンピン自然保護区），日本（鹿児島県口永良部島）から初めて記録した．本種の和名については，かつて「ヒゲブトアリヅカムシ」と称されたことがあったが，グループの総称と紛らわしいため，新たに「ネジレヒゲブトアリヅカムシ」と改称することを提唱したい．

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